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To:	Bobbak Safaipour	**From:**	Melissa Lohmeyer for Kenneth M. Berner
Of:	USPTO	**Date:**	July 31, 2007
Fax:	571-270-2092	**Pages:**	8 (including cover sheet)
Re:	U.S. Patent Application Serial No. 10/534,523 Title: METHOD FOR VERIFYING ANTI-SCRAMBLING EFFICIENCY OF A COMMUNICATION SYSTEM Our Ref: 4590-396		

☐ **Urgent** ☐ **For Review** ☐ **Please Comment** ☐ **Please Reply**

Attached is a revised Amendment as filed on July 20, 2007.

Docket No.: 4590-396 **PATENT**

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of	
Pascal CHEVALIER *et al.*	Confirmation No. 5088
U.S. Patent Application No. 10/534,523	Group Art Unit: 2618
Filed: May 11, 2005	Examiner: Bobbak Safaipour

For: METHOD FOR VERIFYING ANTI-SCRAMBLING EFFICIENCY OF A COMMUNICATION SYSTEM

AMENDMENT

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

In response to the Office Action of April 20, 2007, please amend the above-identified application as follows:

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

1. (previously presented): A method for the verification of anti-jamming in a communications system having several sensors or adaptive antennas, comprising the following steps :

estimating a mean power $\pi;\hat{}_y$ of the output of the communications system,

estimating a respective power values Pu or P'u, of a station u, the antenna noise Pa or P'a, the thermal noise PT, or P'T,

estimating at least one of the following ratios :

$$Jtot/Stot = \left(\sum_{p=1}^{P} Pp\right) / \left(\sum_{u=1}^{U} Pu\right)$$

with p = the jamming unit

= sum of the power values of the residual jamming units/sum of the power values of the stations on the reception band B

$$Jtot/Su = \left(\sum_{p=1}^{P} Pp\right) / Pu$$

= sum of the power values of the residual jamming units/power of the station u in the reception band B.

$$Ju/Su = \left(\sum_{p=1}^{P} Ppu\right) / Pu$$

with Ppu = power of the jamming unit p in the reception band Bu.

and comparing at least one of the three ratios with a threshold value.

2. (previously presented): The method for the verification of anti-jamming according to claim 1, comprising a step for estimating the mean power π_y, for an output from a number K of samples, $y(k)$, $1 \leq k \leq K$ of this output, given by

$$\pi_y = \frac{1}{K} \sum_{k=1}^{K} | y(k) |^2$$

3. (previously presented): The method for the verification of anti-jamming according to claim 1, comprising a step of estimation P_u, P'_u of the power P_u , P'_u in using, firstly, a priori knowledge of the parameters w and G_{num} for a digital application of the adaptive filters and $|\alpha|^2$, w and G for an analog application of the filters and secondly the estimation of the parameters π_u and S_u.

4. (previously presented): The method for the verification of anti-jamming according to claim 1, comprising an estimation P_u, P'_u of the power P_u, P'_u in using, firstly, a priori knowledge of the parameters w and G_{num} for a digital application of the adaptive filters and $|\alpha|^2$, w and G for an analog application of the filters and secondly the estimation of the parameter η_a.

5. (previously presented): The method for the verification of anti-jamming according to claim 1, comprising a step of estimation P_u, P'_u of the power P_u, P'_u in using a priori knowledge of the parameters w and G_{num} for a digital application of the adaptive filters and $|\alpha|^2$, w and G for an analog application of the filters and secondly the estimation of the parameter η_T.

6. (previously presented): The method for the verification of anti-jamming according to claim 1, comprising a step of estimation $\hat{J}_{tot} / \hat{S}_{tot}$, of the ratio J_{tot}/S_{tot} given by

$$\hat{J}_{tot} / \hat{S}_{tot} = (\hat{\pi}_y \cdot \tilde{\sum}_{u=1}^{U} \hat{P}_u \cdot \tilde{P}_a \cdot \hat{P}_T) / (\sum_{u=1}^{U} \hat{P}_u)$$

7. (previously presented): The method for the verification of anti-jamming according to claim 1, comprising a step of estimation $\hat{J}_{tot} / \hat{S}_u$, of the ratio J_{tot}/S_u, given by

$$\hat{J}_{tot} / \hat{S}_u = (\hat{\pi}_y \cdot \tilde{\sum}_{u=1}^{U} \hat{P}_u \cdot \tilde{P}_a \cdot \hat{P}_T) / \hat{P}_u$$

8. (previously presented): The method of verification of anti-jamming according to claim 1, comprising a step of estimation $\hat{J}/\hat{S}_u$, of the ratio J/S_u in using the total power of residual jamming units in the B_U band of the working station u given by

$$\hat{J} / \hat{S}_u = (\hat{\pi}_{yu} \cdot \tilde{P}_u \tilde{\sum}_{v \neq u} \hat{P}_{vu} \cdot \tilde{P}_{au} \cdot \hat{P}_{Tu}) / \hat{P}$$

9. (previously presented): A method of verification of anti-jamming according to claim 1 comprising a step of determination of the precision of estimation, and wherein this value is used to set the threshold.

10. (canceled):

11. (canceled):

12. (previously presented): A use of the method according to claim 1.

13. (canceled):

14. (canceled):